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Assessing Experiential Learning

Introduction

For teachers and students to realize the learning experience and outcomes in experiential learning projects, it is important for us to assess students regardless these projects are credit bearing or not. Funding and accreditation bodies often request assessment data of experiential service learning projects in order to demonstrate accountability for the public and administrative concerns on resource utilization. Here, we will discuss some of the assessment methods that are often used to assess experiential community service projects i.e. reflective journal, direct observation, presentation, oral assessment and individual documentation.

Reflective Journal

What is Reflective Journal?

Reflective journal is a mean for students to record ideas, personal thoughts and experiences, as well as reflections and insights gained during and/or after their community service experience.

Example

At the University of Detroit Mercy (Michigan, USA), as a service-learning component of a heat transfer course, mechanical engineering students visited homes to install plastic storm windows and door sweeps, in order to help save on heating fuel and electricity bills.

Teachers assessed students' service learning experience by asking them to complete reflective journals on their experience, in terms of their attitudes and perceptions before, during and after the service experience (Dukhan, Schumack, & Daniels, 2008). Students were expected to reflect on the following questions (taken from Dukhan, Schumack, & Daniels, 2008):

- How did you feel about doing this assignment, before, during and after making your visit?
- How did you feel about going into some strangers' house, somebody who might be poor, who might be different from you?
- How did you feel while you were there? How do you feel now?
- Engineers are gifted at seeing details and making connections. Considering that most engineering problems relate to material objects, how much of a stretch is it for you to notice the human factors around you?
- What did you notice about the people you saw on your site? How were they different from you? How were they similar to you? Can you imagine them as engineering students? Why or why not?
- How does this project relate to you as an engineering student?

More information on Reflective Journal

Based on Welch's ABCs of Reflection (Welch, 1999), reflection involves three elements - affect, behavior and cognition.

1.) Affect – identification of thoughts/feelings during the community service experience through an exploration of emotions.

Possible prompts for reflection (affect)

- What does the community service learning experience tell you about yourself?
- What were you thinking and feeling during the community service learning project?
- What are the values and beliefs which you based your decision-making on during your community service learning experience?
- How did my relationship with other people influence my community service learning experience?

2.) Behavior – a descriptive account of the events that occurred during the service experience, as well as an examination of past, present & future behavior

Possible prompts for reflection (behavior)

- What did you do during the community service learning project?
- Where did you participate in the community service learning project?
- Who did you interact with during the community service learning project?

3.) Cognition – discussion of how academic knowledge is applied to the community service project

Possible prompts for reflection (cognition)

- How well does your community service learning experience fit in with the contemporary engineering practice?
- What does your community service learning experience suggest about ways in which the engineering industry needs to develop to best meet the needs of the population?

(With reference to Whitfield et al., 2009)

References:

- Dukan, N., Schumack, M. R., & Daniels, J. J. (2008). Implementation of service-learning in engineering and its impact on students' attitude and identity. *European Journal of Engineering Education*, 33(1), 21-31.
- Welch, M. (1999). The ABCs of reflection: A template for students and instructors to implement written reflection in service-learning. *NSEE Quarterly*, 25, 22-25.
- Whitfield, M. F., Anderson, J. F., Lazenby, R., & Giannopoulos, N. (2009). Community service learning - Student package. Retrieved from http://csl.ubc.ca/files/2010/01/dpas420_09-10_student-package_sept9_cslo-final.pdf

Direct Observation

What is Direct Observation?

Direct observation is conducted based on teachers' and/or supervisors' judgment of students' ability in relation to the intended learning outcomes while observing their performance during the community service project (Chan, 2008).

Example

In addition to other assessment, such as presentation, daily reflective journal and summative report, the daily performance of students participating in the Sichuan Reconstruction Community Service Project organized by the Faculty of Engineering at the University of Hong Kong was assessed by both professional assessors in Sichuan and team supervisors (Chan, 2012). Team supervisors recorded their observation of students' daily performance on their initiative to learn and their contribution to the project, while professional assessors in Sichuan recorded their observation of students' performance in team building activities (e.g. assessment of how well students have participated and cooperated with group members during the service project).

The assessment framework used for the HKU Sichuan Reconstruction Project can be downloaded here (http://hke3r.cetl.hku.hk/doc/AECSP_HKU.pdf).

References:

- Chan, C. K. Y. (2008). Direct observation. Retrieved from http://ar.cetl.hku.hk/am_do.htm
- Chan, C. K. Y. (2012). Assessment for community service types of experiential learning in the engineering discipline. *European Journal of Engineering Education*, 37(1), 29-38.

Presentation

What is a Presentation?

Presentation allows teachers to judge students' understanding and presentation skills while observing students' presentation of their experiential learning experience. Students may be asked to integrate academic theories with their experience and share their overall learning experience with fellow students. Students' competence may be assessed in terms of content relation, knowledge grasp, presentation style, enthusiasm and audience engagement (Chan, 2012).

Examples

Example 1: Sichuan Reconstruction Community Service Project

Several types of assessment were used to assess students participating in the Sichuan Reconstruction Community Service Project (Chan, 2012) organized by the Faculty of Engineering at the University of Hong Kong. This included direct observation, daily reflective journal and summative report and in addition, students were also required to present at a student conference. Their presentation performance was assessed in terms of content relation, knowledge grasp, presentation style, enthusiasm and audience engagement.

Example 2: Engineering Projects in Community Service (EPICS) Program

Students who participate in the Engineering Projects in Community Service (EPICS) Program at Purdue University are required to do a presentation in addition to other assignments such as a report, reflection and individual documentation. Students are expected to include the following components in their presentation:

- 1.) Introduction of the community service project partner such as an NGO or an external organization (if any), in terms of their mission, target population and how do students support the work of the project partner.
- 2.) Introduction of the team organization, in terms of the role of the team leader and team members
- 3.) Introduction of the project in terms of the following:
 - What is the need being addressed?



- What was the motivation for the project?
 - What goals are you trying to achieve with the project? How will the project improve the current situation?
 - Who are the stakeholders?
 - What is the overall timeline of the project?
- 4.) Other possible questions:
- What is the context in which the project is situated?
 - What prototypes were created?
 - How did the service recipients interacted with the project?

A detailed template and an example of the Project Conceptual Review Presentation can be downloaded here

(https://engineering.purdue.edu/EPICS/Resources/Forms/design_review_templates).

An overview of the learning outcomes and assessment methods used in EPICS can be downloaded here (http://hke3r.cetl.hku.hk/doc/AECSP_EPICS.pdf).

References:

- Chan, C. K. Y. (2012). Assessment for community service types of experiential learning in the engineering discipline. *European Journal of Engineering Education*, 37(1), 29-38.
- EPICS Program & Purdue University. (n.d.). Guidelines and templates. Retrieved from
https://engineering.purdue.edu/EPICS/Resources/Forms/design_review_templates

Oral Assessment

What is Oral Assessment?

Oral assessment allows teachers assess students' service learning outcome directly by questioning them.

Example

In an Enterprise & Service-Oriented Architecture (ESOA) course (Regev, Gause, & Wegmann, 2009), a review panel consisting of instructors and community partners was involved in assessing students' feelings and reflection on technical skills through individual oral examination, which required students to solve a new problem or explained a detail about a model produced by their team during the service learning project.

Sample Questions include:

- Ask for an account of the service experience (e.g. How do you think you did in the service project?)
- Use of probing questions to initiate and engage students in conversation

References:

- Regev, G., Gause, D. C., & Wegmann, A. (2009). Experiential learning approach for requirements engineering education. *Requirements Engineering*, 14(4), 269-287.

Individual Documentation

What is Individual Documentation?

Individual documentation (EPICS Program & Purdue University, n.d.) in the form of design notebooks or blogs allows students to demonstrate their individual accomplishments and thinking.

Example

Students participate in the Engineering Projects in Community Service (EPICS) at Purdue University are expected to include the following in their individual documentation:

- An individual's work on the project, including brainstorming, sketches, calculations, designs and action items.
- Record of team meetings, including agendas, major discussion items, and action items that result from the meeting.
- Relevant information and discussions from lectures
- Contact information of people whom one has consulted about the project and minutes of the discussion with project partners.
- Outcomes from all relevant conversations, including phone & email conversations.
- Documents that the student contributed to, brief notes and information on these documents.
- Reflections either prompted by specific project experiences, or by reflection questions.

(Accessed from EPICS Program & Purdue University, (n.d.))

Examples of individual documentation prepared by students can be downloaded here (https://engineering.purdue.edu/EPICS/Resources/Forms/Ind_Doc_Examples).

References:

- EPICS Program & Purdue University. (n.d.). Guidelines and templates. Retrieved from https://engineering.purdue.edu/EPICS/Resources/Forms/Ind_Doc_Guidelines

Essay

What is an Essay?

The essay “helps students enhance their academic initiative relating to their experiential learning and reflect innovatively and critically” (Faculty of Social Science, HKU, p.6) about how their community service learning project and their service tasks impact the society.

Example

Students who participated in the Social Innovation/Global Citizenship Internship at University of Hong Kong were assessed based on their overall performance at the community partner organization (50%), poster presentation (10%) and integrated essay (40%). It was recommended that the integrated essay should include:

- Background of the organization.
- Identification of service gap and making recommendation/suggestions for the organization.
- Description & evaluation of the service tasks in the service project.
- Directions/recommendation for future service projects for sustainable development.

References:

- Faculty of Social Science, HKU. (2013). Internships Summer 2013 (Service leadership internship). Retrieved from [http://www.socsc.hku.hk/sigc/sigc2013/pdf/download/Internship%20Handbook%20\(SLI\).pdf](http://www.socsc.hku.hk/sigc/sigc2013/pdf/download/Internship%20Handbook%20(SLI).pdf)